

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT



(PCT Article 36 and Rule 70)

Applicant's or Agent's file reference	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR 03/01800	International filing date (day/month/year) 13.06.2003	Priority date (day/month/year) 14.06.2002
International Patent Classification (IPC) or national classification and IPC G01K13/02		
Applicant THALES et al.		

- This International preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets including this title page.
 - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Instruction 607 of Administrative Instructions of the PCT).

These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the report
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement according to Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 04.12.2003	Date of completion of this report 21.01.2004
Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. +49 89 2399-0, Tx: 523656 epmu d Fax: +49 89 2399-4465	Authorized officer: Thomte, M Telephone No. +49 89 2399-2610 

I. Basis of the report

1. This report has been drawn up on the basis of the following elements *(the replacement sheets received by the receiving office in response to an invitation according to Article 14 are considered in the present report as "originally filed" and are not annexed to the report as they contain no amendments (Rules 70.16 and 70.17).):*

Description, pages:

1-4 as originally filed

Claims, No.:

1-5 as originally filed

Drawings, sheets:

1/1 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

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4. The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig

5. ☐ This report has been written disregarding (some of) the amendments, which were considered as going beyond the description of the invention, as filed, as is indicated below (Rule 70.2(c)):

(All replacement sheets comprising amendments of this nature should be indicated in point 1 and attached to this report).

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty	Yes:	Claims	1-5
	No:	Claims	
Inventive Step	Yes:	Claims	1-5
	No:	Claims	
Industrial Applicability	Yes:	Claims	1-5
	No:	Claims	

2. Citations and explanations

see separate sheet

SECTION V

1. The invention relates to a total temperature measurement probe for an aircraft [claim 1] and also relates to a method for determining the temperature by means of such a probe [claim 4].
2. It is well known to measure the total temperature for an aircraft. However, when the speed of the flow is low or zero, the measurement is affected by various factors, including the heating needed for deicing and also solar radiation, which factors have the effect of raising the temperature of the probe to a value above that of the surrounding air.
In the prior art, attempts have been made to remedy the drawbacks by installing the probe in a region protected from sunshine, for example under the fuselage, or attempts have also been made to cause forced convection around the measurement element of the probe. As is clearly apparent from pages 1 to 2 of the description, said solutions are not appropriate as they are very expensive and they may result in aerodynamic disturbances.
3. From document FR-A-2 802 647 (which is considered as being the closest prior art) it is known to use a total temperature measurement probe for an aircraft comprising a base, an external face of which is intended to be mounted so as to be substantially coplanar with a skin of the aircraft, and a mast that projects from the base and supports an active part of the probe. As is explained on page 1 of the description, it is possible to correct certain measurement errors, but there is no suggestion of taking into account the rise in temperature of the probe caused by solar radiation.
4. The probe according to the invention as defined in claim 1 differs from that of said document in that it furthermore includes several temperature sensors placed on the external face of the base and distributed around the mast. The features of claim 1 are neither